

Title (en)

Electrophotographic toner and development process with improved image and fusing quality

Title (de)

Elektrophotographischer Toner und Entwicklungsverfahren mit verbesserter Bild- und Fixierqualität

Title (fr)

Révéléateur électrophotographique, procédé de développement à définition d'image amélioré et qualité de fixation

Publication

EP 1258785 A2 20021120 (EN)

Application

EP 02010123 A 20020510

Priority

- US 29069101 P 20010514
- US 13884002 A 20020503

Abstract (en)

Development systems and methods for developing using toner are disclosed. The present invention further discloses developers used in development systems. With respect to the development system, a development system is disclosed which includes a supply of dry developer mixture which contains toner particles and hard magnetic carrier particles. The development system further includes a non-magnetic, cylindrical shell for transporting the developer between the supply and the development zone, wherein the shell can be rotatable or stationary. A rotating magnetic core of a pre-selected magnetic field strength and means for rotating at least the magnetic core to provide for the transport of the toner particles from the shell to an electrostatic image also provided as part of the development system. The development system of the present invention further includes a fuser roll which is coated with a silicone rubber or other low surface energy elastomer or resin. The fuser roll is preferably in a pressure contact arrangement with a backup or pressure roll. The images resulting from the development system of the present invention have an excellent combination of properties, in particular, the prints resulting from the development process of the present invention have improved image quality in combination with excellent fusing quality. A method for developing electrostatic images with toner is further disclosed, for example, involving the above-described development system.

IPC 1-7

G03G 15/20; **G03G 9/097**

IPC 8 full level

G03G 9/097 (2006.01); **G03G 9/107** (2006.01); **G03G 9/113** (2006.01); **G03G 13/09** (2006.01); **G03G 13/20** (2006.01)

CPC (source: EP US)

G03G 9/09708 (2013.01 - EP US); **G03G 9/09725** (2013.01 - EP US); **G03G 9/09733** (2013.01 - EP US); **G03G 9/1075** (2013.01 - EP US); **G03G 9/1133** (2013.01 - EP US); **G03G 9/1134** (2013.01 - EP US); **G03G 9/1135** (2013.01 - EP US); **G03G 9/1136** (2013.01 - EP US); **G03G 13/09** (2013.01 - EP US); **G03G 13/20** (2013.01 - EP US)

Cited by

US9964713B2; US11036010B2; US11402588B2; US11892686B2

Designated contracting state (EPC)

DE GB NL

DOCDB simple family (publication)

EP 1258785 A2 20021120; **EP 1258785 A3 20090819**; US 2003013032 A1 20030116; US 6797448 B2 20040928

DOCDB simple family (application)

EP 02010123 A 20020510; US 13884002 A 20020503